

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P308544

Luminaire Tested: **22FCZ2-39HE-UNV-L82765-RDP-CP187-W2A-U-5700K**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P308544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-39HE-UNV-L82765-RDP-CP187-W2A-U-5700K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.187" POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2316.0 lumens
Efficiency: N/A
Efficacy: 69.5 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

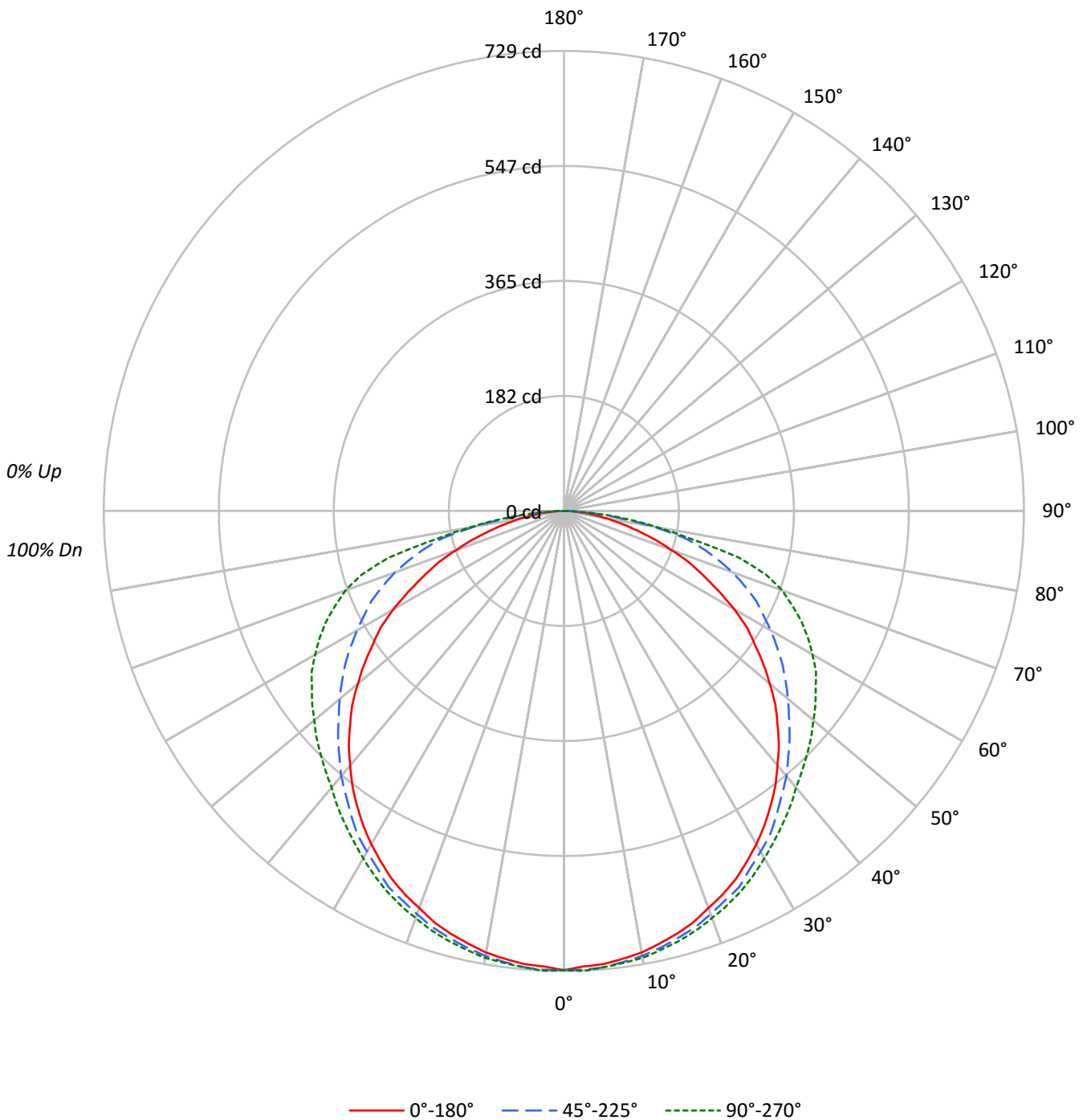
Input Watts (W): 33.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1958	1958	1958
5°	1947	1961	1961
10°	1941	1955	1965
15°	1932	1951	1965
20°	1918	1947	1966
25°	1912	1953	1973
30°	1895	1938	1975
35°	1875	1931	1987
40°	1850	1927	2011
45°	1822	1926	2075
50°	1783	1940	2161
55°	1734	1982	2286
60°	1678	2035	2448
65°	1562	2137	2647
70°	1434	2238	2895
75°	1258	2356	2993
80°	1083	2244	2349
85°	948	1630	1788



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.0
10°-20°	197.6	8.5
20°-30°	301.5	13.0
30°-40°	368.1	15.9
40°-50°	393.6	17.0
50°-60°	379.9	16.4
60°-70°	327.0	14.1
70°-80°	221.3	9.6
80°-90°	58.4	2.5
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	567.9	24.5
0°-40°	935.9	40.4
0°-60°	1709.4	73.8
0°-90°	2316.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2316.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	728	728	728	728	728	
5°	721	722	726	726	726	68
15°	693	695	700	704	705	196
25°	644	647	658	661	664	296
35°	571	576	588	600	605	357
45°	479	487	506	532	545	370
55°	370	382	422	465	487	331
65°	245	269	336	388	416	244
75°	121	160	227	273	288	130
85°	31	43	53	54	58	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	727.5	727.5	727.5	727.5	727.5
2.5°	722.4	724.1	727.5	727.5	729.2
5°	720.7	722.4	725.8	725.8	725.8
7.5°	715.6	717.3	720.7	722.4	722.4
10°	710.5	712.2	715.6	717.3	719.0
12.5°	701.9	703.6	708.8	712.2	712.2
15°	693.4	695.1	700.2	703.6	705.3
17.5°	683.2	686.6	691.7	695.1	696.8
20°	669.6	673.0	679.8	684.9	686.6
22.5°	657.6	661.1	667.9	673.0	676.4
25°	644.0	647.4	657.6	661.1	664.5
27.5°	627.0	630.4	638.9	645.7	650.8
30°	609.9	613.3	623.6	632.1	635.5
32.5°	591.2	596.3	608.2	615.0	620.2
35°	570.8	575.9	587.8	599.7	604.8
37.5°	550.3	555.4	567.3	582.7	589.5
40°	526.5	533.3	548.6	569.0	572.5
42.5°	504.3	512.8	526.5	550.3	558.8
45°	478.8	487.3	506.0	531.6	545.2
47.5°	454.9	463.4	483.9	514.5	531.6
50°	425.9	437.9	463.4	499.2	516.2
52.5°	398.7	408.9	443.0	482.2	502.6
55°	369.7	381.6	422.5	465.1	487.3
57.5°	344.2	354.4	400.4	448.1	473.6
60°	311.8	325.4	378.2	429.3	454.9
62.5°	277.7	298.2	356.1	408.9	436.2
65°	245.3	269.2	335.6	388.5	415.7
67.5°	216.4	241.9	310.1	366.3	391.9
70°	182.3	214.7	284.5	339.0	368.0
72.5°	151.6	187.4	255.6	310.1	335.6
75°	121.0	160.2	226.6	272.6	287.9
77.5°	93.7	131.2	194.2	207.9	209.6
80°	69.9	103.9	144.8	146.5	151.6
82.5°	47.7	73.3	93.7	102.2	103.9
85°	30.7	42.6	52.8	54.5	57.9
87.5°	13.6	15.3	18.7	17.0	17.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)